

Using Groundwater Geochemistry to Improve Groundwater Flow Models

Gordon Ratray

Hydrologist

U.S. Geologic Survey
1955 N. Fremont Avenue, MS 1160
Idaho Falls, Idaho 83415
208-526-2062
gratray@usgs.gov

Groundwater flow models are increasingly being used to help manage water resources. Consequently, it is important to develop flow models that provide accurate model predictions for use in water management decisions. The accuracy of flow models often may be improved with a better understanding of the hydrologic system.

One method of improving this understanding is with studies of groundwater geochemistry. For instance, groundwater geochemistry studies were used to improve the understanding the sources of recharge, mixing of water, and groundwater flow directions in the eastern Snake River Plain (ESRP) aquifer at the Idaho National Laboratory (INL).

The results of these geochemistry studies will be used to improve conceptual models and numerical flow models of the aquifer.